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Euterpe ㉗.

Mean Solar Time of Observation.		Apparent R.A.	Apparent N.P.D.
	h m s	h m s	° ′ ″
1860, Nov. 2	9 45 32·5	0 35 3·60	89 4 10·72
3	9 41 3·4	0 34 30·31	89 6 36·73

Amphitrite ㉙.

Mean Solar Time of Observation.		Apparent R.A.	Apparent N.P.D.
	h m s	h m s	° ′ ″
1860, Nov. 1	12 31 34·5	3 17 36·32	63 18 51·07
2	12 26 38·0	3 16 35·53	63 19 36·80
3	12 21 41·0	3 15 34·32	63 20 32·60
7	12 1 47·2	3 11 23·39	63 25 49·95
22	10 47 12·1	2 55 44·46	64 4 40·12

Minor Planet (59).

Mean Solar Time of Observation.		Apparent R.A.	Apparent N.P.D.
	h m s	h m s	° ′ ″
1860, Nov. 3	9 16 10·9	0 9 33·73	95 15 36·35
7	8 59 56·7	0 9 3·06	95 25 27·22

Occultation of Jupiter's Third Satellite.

Day of Observation.	Phenomenon.	Mean Solar Time.	Observer.
		h m s	
1860, Nov. 2	Occ. disapp. first cont.	13 15 50·6	D.
	,, last cont.	13 21 49·6	D.
	Occ. reapp. central bis.	17 1 43·7	A. D.
	,, last cont.	17 5 13·2	A. D.

At the reappearance the planet was very faint, in consequence of a fog prevailing.

The initials D. and A. D. are those of Mr. Donkin and Mr. Davis.

Minor Planet (60).

The name *Titania* has been given to this planet. The following is the later of two sets of elements computed by the discoverer, Mr. Ferguson (*Gould Ast. Journal*, No. 141).

Epoch 1860, Oct. 1, Washington M.T.

	° ′ ″	
Mean longitude	199 48 13·8	
Longitude of perihelion......	158 6 45·7	Mean Equinox of Epoch.
Longitude of node	187 15 15·8	
Inclination	4 40 18·8	
Excentricity	11 27 10·2	
Log. mean distance	0·359725	
Mean motion	1024″·3	

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A portfolio of drawings of Solar Spots, by the Rev. F. Howlett, presented by him to the Society, was exhibited at the Meeting. The following is an extract from a letter to Sir J. W. F. Herschel, which accompanied this valuable present:—

"The drawings I now have the honour of submitting to you illustrate (with intermissions, of course, of greater or less duration) the period comprised between 23d Nov. 1859, and 10th Nov. 1860, inclusive; and they consist of about 100 diagrams of the whole solar disk, as seen under a magnifying power of about 30 diameters, and also of some 130 more diagrams of the separate spots, or groups of spots, magnified commonly about 120 diameters.

"It may be seen that many of the drawings were taken at an early hour in the morning, more especially during the months of June, July, and August last past; not only on account of the sky having frequently been very clear and serene at such times, even during this last unusually wet and gloomy summer, but also because the inclination to the horizon of any fixed line on the sun's disk (such as the line of junction of two spots) changes but very slowly in the earlier hours of the forenoon, and is, in fact, for about an hour or so, nearly unaltered; and thus an excellent opportunity was afforded, at such times, for noting down the relative positions of the spots on the sun's disk at greater leisure and with greater accuracy than, with the rough micrometric appliances at my command, I could easily have done at any hour nearer to noon, when the change of the obliquity of the sun's axis to the vertical is very much greater.

"With respect to other points, perhaps of interest in connexion with these diagrams generally, I would remark that the most conspicuous outbursts of spots hitherto this year (so far, at least, as I myself have observed) occurred, firstly, between the 28th June and the 7th, or say 9th of July, as delineated in sheets Nos. xxiii., xxiv., and xxv., wherein also are presented, as well as my 'Dollond' of barely 3 inches aperture enabled me to investigate them, certain of the changes successively undergone by the groups more particularly lettered therein ζ and ϵ.

"The second principal outburst might be assigned, I think, to the period between 28th July and 8th Sept. (unless indeed the sun's rotation in rather more than twenty-five days may have brought some of the later June and earlier July groups again into sight, and which I certainly am inclined to think was the case), as shown in sheets Nos. xxviii. to xxxii. inclusive; wherein likewise are presented the series of changes undergone by group μ, for instance, in xxviii. and xxix., and still more by ϱ in xxxi. and xxxii. The spot θ in No. xxv. (which also was observable on the day of the solar eclipse in July last) is likewise rather worthy of notice.

"As regards the darkest part of the nucleus of a spot (so

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frequently and so distinctly brought out by the Rev. Mr. Dawes' method of investigating them, as stated in your 'Outlines of Astronomy') this phenomenon was very apparent even without any such method, in the spot β of 23d Nov. 1859, in sheet No. ix.; and again, on the 4th and 7th Sept. 1860, in the right-hand nucleus of spot ϵ, in No. xxxii.

"The large spot ζ, of 1st July, 1860, presented a very singular step-like appearance (No. xxiii.). At this period also, as well as on the 28th and 29th June, I observed a nucleus in this group more nearly approaching in form those curious wedge-shaped ones which were represented in my drawings of 28th August, 1859, than any others which have occurred, I believe, since the date just mentioned. The changes undergone by the group ζ, between its first appearance about 27th June and its disappearance, were very striking, more especially in the interval between the 1st and 2d July (see sheets xxiv. and xxv.)

"On the 22d June I noticed near the western limb of the sun a facula which appeared to extend, in a wavy continuous streak, to a length of at least 150,000 miles on the sun's surface, as faintly indicated in the disk of that day in No. xxii.

"The predominance of spots in the sun's northern hemisphere was, perhaps, not so decided this year as usual, though it was sufficiently marked during the great outburst in June and July last."

And appended to the letter was an account of the method adopted for noting down the positions of the spots on the disk; the co-ordinates employed are, in fact, those of Pastorf, viz., the distances in two directions at right angles to each other, of the point from the circumference of the disk. It has already been remarked by Mr. Carrington that the employment of such co-ordinates is anything but convenient.

There were exhibited at the Meeting four photographs of the Sun during the Eclipse of the 18th July, 1860, obtained at Desierto de las Palmas in Spain, by M. Monserrat, Professor of Chemistry at the University of Valentia, with the telescope by Cauchoix of the Observatory of the Collegio Romano, brought by the Director, P. Secchi. The photographs were communicated to the Astronomer Royal by Signor Aguilar, the Director of the Madrid Observatory.

At the Meeting in November were exhibited two lithographic drawings of Nebulæ, accompanied with a printed

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description, presented by Mr. Lassell. The one of them represented the Annular Nebula in *Lyra*; R.A. $18^{h}\ 48^{m}\cdot4$, N.P.D. 57° 8′, as seen in the 4-foot equatoreal, power 174, the field of view being about $5''\cdot68$ in diameter, the scale of the drawing was $1'' = 0\cdot015$ inch. The greater axis of the nebula is about 89′, and the lesser about 68″, by micrometrical measurement. The other drawing was a representation of the "Dumb Bell" Nebula, as seen with the 4-foot equatoreal, and the same power and field of view as was employed in the drawing of the Annular Nebula of *Lyra*.

RECENT PUBLICATIONS.

Recueil de Mémoires des Astronomes de l'Observatoire Centrale de Russie, publié avec l'autorisation de l'Académie des Sciences, t. II. Pet. 1859.

The first volume of this Collection, published 1853, and containing various important memoirs by MM. Struve, Peters, Döllen, Lindhagen, O. Struve, and Liapounov, is well known to astronomers. The present and concluding volume contains memoirs by M. O. Struve on the chronometrical expeditions in the years 1845 and 1846, and on the geographical positions determined by Lieut.-Col. Lemm, in 1847 in the country of the Don Cossacks, and in 1848 in the Government of Novgorod; the volume contains also the Pulkova observations of Biela's comet in the year 1852, with two plates of the comet as seen on the 20th Sept. and the 25th Sept. 1852; for a notice of these observations see *Monthly Notices*, vol. xvi. p. 137. M. O. Struve in the preface states that in consequence of the new regulations adopted by the Academy of Sciences at St. Petersburg, the collection will cease to appear in its actual form, but that a fixed number of copies of the astronomical memoirs will be put at the disposition of the Central Observatory, and that the scientific establishments, and Russian and foreign *savans*, who have received from the Observatory the two volumes of the Collection, will receive each separate astronomical memoir as it is printed, and that the works of the Russian astronomers will thus be more speedily brought to the knowledge of the astronomical public. The two memoirs next referred to have in fact already appeared in the new form; and the preface announces also the speedy publication of two other memoirs, by MM. Liapounov and O. Struve, on the great nebula of *Orion*.
